

## CLAIMS

What is claimed is:

1. A D-DAFO (DeRoss- Dynamic Ankle Foot Orthosis) comprising a posterior base shell, <sup>7</sup> (an anterior (pre-tibial) <sup>8</sup> shell), <sup>9</sup> a tongue, attachment means for securing said posterior base shell, <sup>8</sup> (said outer anterior shell) and <sup>9</sup> said tongue about said D-DAFO ankle foot orthosis, and wherein said D-DAFO ankle foot orthosis further includes <sup>spec?</sup> (an upper tibia <sup>spec?</sup> portion) <sup>spec?</sup> with a front and back <sup>spec?</sup> portion disposed about a vertical axis, and <sup>spec?</sup> (a lower ankle forefoot portion) <sup>spec?</sup> with a top and bottom <sup>spec?</sup> portion disposed about a horizontal axis of a subject patient's foot.
2. A D-DAFO according to claim 1, wherein said posterior base shell <sup>7</sup> further includes a pair of <sup>spec. 15</sup> (upper) flanges for securing the posterior base shell <sup>7</sup> with the tongue <sup>9</sup> and <sup>8</sup> (outer anterior shell) with said attachment means provided about <sup>spec. 1</sup> (the upper tibia portion) of the D-DAFO ankle foot orthosis and about the vertical axis.
3. A D-DAFO according to claim 1, wherein said posterior base shell <sup>7</sup> further includes a pair of <sup>spec. 16</sup> (lower) flanges for securing the posterior base shell <sup>7</sup> with the tongue <sup>9</sup> and said attachment means provided about the lower ankle forefoot portion of the D-DAFO ankle foot orthosis and about the horizontal axis.
4. A D-DAFO according to claim 1, wherein said attachment means <sup>12</sup> for securing said posterior base shell <sup>7</sup> and said pair of upper flanges <sup>15</sup> with the tongue <sup>9</sup> and said <sup>8</sup> (outer) anterior shell about the upper tibia portion of the D-DAFO ankle foot orthosis and said vertical axis is an elastic strap.

**CLAIMS (Cont'd)**

5. A D-DAFO according to claim 1, wherein said attachment means for

securing said posterior base shell with said pair of lower flanges with the tongue about the lower ankle foot portion of the D-DAFO ankle foot orthosis and said horizontal axis is a Velcro strap.

6. A D-DAFO according to claim 1, wherein said attachment means for

securing said upper pair of flanges of said posterior base shell with said elastic strap, said tongue, and said outer anterior shell and said attachment means for securing said lower pair of flanges of said posterior base shell with said Velcro strap, said tongue, and said outer anterior shell includes rivet fasteners.

7. A D-DAFO according to claim 1, wherein said posterior base shell further includes forefoot posting and hind foot posting disposed about said bottom portion of said lower ankle forefoot portion.)

8. A D-DAFO (DeRoos-Dynamic Ankle Foot Orthosis) comprising:

(a) a posterior base shell with an upper portion further including a front portion and a back portion disposed about a generally vertical axis, and a lower portion having a top portion and a bottom portion disposed about a generally horizontal axis;

(b) said posterior base shell further includes a forefoot posting and a hindfoot posting at the bottom portion of said D-DAFO ankle foot orthosis;

(c) an outer anterior pre-tibial shell for engaging said posterior base shell

about both the vertical axis so as to maintain the D-DAFO ankle orthosis in proper attitude while ensuring dynamic flexibility;

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Allow?

ante

CLAIMS (Cont'd)

8. (Cont'd)

→ (d) a <sup>9</sup>tongue disposed between the posterior base shell <sup>7</sup> and <sup>8</sup>outer anterior (pre-tibial) shell having an <sup>15</sup>upper half portion and <sup>16</sup>lower half portion to engage the D-DAFO orthosis;

(e) said front portion of said upper portion of said posterior base shell further includes a pair of external flanges, <sup>15</sup>and said top portion of said lower portion of said posterior base shell <sup>7</sup>further includes a pair of <sup>16</sup>external flanges providing attachment means for the posterior base shell, and the tongue;

(f) an elastic <sup>12</sup>upper strap for retaining the the pair of <sup>15</sup>external flanges <sup>7</sup>on the upper portion of said posterior base shell and the upper half portion of the tongue;

(g) a <sup>11</sup>Velcro strap for retaining and securing said pre-tibial shell <sup>8</sup>with the external <sup>16</sup>flanges of the lower portion of said posterior base shell and the lower half portion of the tongue;

(h) <sup>10</sup>a liner disposed to engage the top portion of said lower portion of said posterior base shell and the outer anterior pre-tibial shell and the <sup>12</sup>D-DAFO orthosis posterior; and

(i) <sup>13</sup>rivet fastener means for attaching and securing the elastic upper strap and <sup>11</sup>Velcro strap with the pairs of external flanges disposed upon the upper portion and lower portion of the said posterior base shell for engaging the tongue and posterior base shell with the D-DAFO ankle orthosis about the patient's foot.